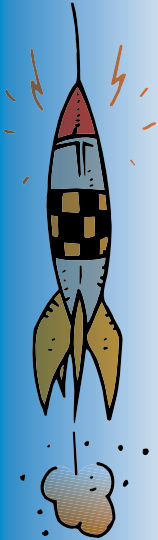


Blood, Bacteria, Bone, and Rats... It's all 'K!



When you get a cut, the blood eventually stops flowing because a blood clot forms. This process is known as "coagulation" (pronounced ko-ag-you-lay-shun). Vitamin K is very important in this process. The finding was made in Copenhagen, Denmark, and the vitamin was named for its role in "koagulation." Vitamin K represents just how exciting the field of nutrition can be. We are still learning more about what vitamin K does in the body, and how important it is for all of us - even astronauts.

Bacteria...they are a normal part of your digestive tract. Although having bacteria in your intestines may sound gross, it is very important - especially when it comes to vitamin K. The bacteria in your large intestine actually make vitamin K, some of which can be absorbed and used by your body!

Bone...in addition to its role in blood clotting, vitamin K is very important to bone health. Current research indicates that vitamin K helps bones make proteins that hold calcium in place. Some scientists in Europe have even started to investigate whether vitamin K can help protect against bone loss in astronauts.

Rats....dead ones to be exact (and you thought the bacteria part was gross). What's a dead rat have to do with vitamin K?

It's a good lesson for why vitamin K is important. Some types of rat poison are made from a chemical (warfarin) that blocks vitamin K actions. This means the reason it works (and the rats die) is that they end up not having enough vitamin K. This helps show you just how important each vitamin is...



As with most vitamins, the best food sources are vegetables. Vitamin K-rich foods are the dark green and leafy kinds - like spinach, green peas, kale, and broccoli. Just a few bites of spinach has all of the vitamin K you need in a day (and a lot of other vitamins as well). Vegetables are an important part of an astronaut's diet, and of yours. Give it a try....it worked for Popeye!



Thea's Corner...



Did you know?

- The Expedition 9 crew landed safely in Russia last month. Mike Fincke and Gennady Padalka are getting used to gravity, and Mike is getting to know his daughter. She was born while he was on the ISS!



- On election day, Leroy Chiao, the US crewmember on Expedition 10, sent his vote in electronically from the ISS!

Return to Flight work continues at NASA. The Shuttle should be ready to fly in May or June of 2005! The STS-114 crew, led by Commander Eileen Collins, has started full-scale training simulations to train for this next flight.

Across

- 1 _____ Space Station
- 6 ISS Partner to the North
- 9 These shine brightly at night
- 10 Acronym for the Space Station
- 12 _____ System
- 14 Japan space agency
- 15 Trick or _____
- 17 An _____ a day keeps the doctor away
- 19 Orbital Recovery Unit
- 20 Orbiter Processing Facility
- 21 _____ States
- 23 You row a boat with this
- 26 Shuttle name; a mythical city
- 29 Tofu is made from this
- 30 Green leafy vegetable, high in Vit K
- 32 NASA explores this
- 33 Jupiter is a _____ planet (huge)
- 34 Abbreviation for gym class
- 36 Mid-day
- 37 2-3 servings/day are recommended
- 38 If you eat well and exercise, you will be _____

Down

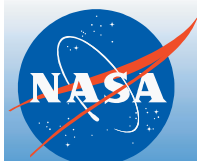
- 2 Exercise and good _____ keep you well
- 3 The Soyuz is a _____ spacecraft
- 4 Enough of something; adequate
- 5 This moon event occurred the last week of October (2 words)
- 7 A planet
- 8 Shuttle name; results of research
- 11 Space Station Processing Facility
- 13 An activity with books
- 16 _____ Space Agency; ESA
- 18 Earth is the third _____ from the Sun
- 22 Astronauts go through a lot of this
- 24 Operating System
- 25 Dairy product that contains bacteria
- 27 _____ pad
- 28 Medical Assessment Testing
- 29 Me, my _____, and I
- 31 Part of your foot that needs support
- 33 Ready, set, _____!
- 34 Best friend
- 35 Bacteria live here in you; a _____ feeling

Word of the Month erythrocyte

Can you guess what this word means? Look it up in the dictionary and see if you were right. We'll have more on this next month!

Web Challenge: You've heard about the Space Shuttle Fleet (Atlantis, Challenger, Columbia, Discovery, and Endeavor), but did you know there was another Shuttle named after a famous TV show spacecraft? See if you can find it in one of the links below...

http://www.nasa.gov/vision/space/livinginspace/chiao_votes.html
<http://www.cdc.gov/powerfulbones>
<http://www.nasa.gov/audience/forstudents/5-8/features/index.html>
<http://kidshealth.org/index.html>
http://www.nasa.gov/vision/earth/everydaylife/nasm_enterprise.html



Check out Thea's Bonus Page, experiments you can try, and even stuff you may have done at our website:

<http://haco.jsc.nasa.gov/biomedical/nutrition/kids.shtml>

